

WHAT IS CLAIMED IS:

1. A synchronous induction motor comprising:
a stator equipped with a stator winding;
a rotor which is secured to a rotating shaft and which rotates in the stator;
a secondary conductor provided around the rotor yoke constituting the rotor; and
a permanent magnet embedded in the rotor yoke,
wherein a magnetic field produced by the permanent magnet does not pass through the rotating shaft.

2. A synchronous induction motor comprising:
a stator equipped with a stator winding;
a rotor which is secured to a rotating shaft and which rotates in the stator;
a secondary conductor provided around the rotor yoke constituting the rotor; and
a permanent magnet embedded in the rotor yoke,
wherein a magnetic field produced by the permanent magnet bypasses the rotating shaft.

3. A synchronous induction motor comprising:
a stator equipped with a stator winding;
a rotor which is secured to a rotating shaft and which rotates in the stator;
a secondary conductor provided around the rotor yoke constituting the rotor; and
a permanent magnet embedded in the rotor yoke,
wherein a magnetic field produced by the permanent magnet passes through only the rotor yoke, excluding the rotating shaft.

4. The synchronous induction motor according to Claim 1, Claim 2, or Claim 3, wherein a void is formed in the rotor yoke between the permanent magnet and the rotating shaft.

5. The synchronous induction motor according to Claim 1, Claim 2, or Claim 3, wherein a pair of the permanent magnets is disposed, sandwiching the rotating shaft therebetween, and permanent magnets for attracting the magnetic field produced by the paired permanent magnets are further disposed at both ends of a line that passes the paired permanent magnets and the rotating shafts.

6. The synchronous induction motor according to Claim 1, Claim 2 or Claim 3, wherein the permanent magnets are provided at both ends of a line that connects two magnetic poles, and the permanent magnets are radially disposed substantially about the rotating shaft.